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=> d his nofile

     (FILE 'HOME' ENTERED AT 14:15:23 ON 10 DEC 2009)

     FILE 'HCAPLUS' ENTERED AT 14:15:32 ON 10 DEC 2009
L1             1 SEA SPE=ON  ABB=ON  PLU=ON  US20080248399/PN
               D L1 ALL


     FILE 'REGISTRY' ENTERED AT 14:18:19 ON 10 DEC 2009
               E TERT-PENTYLBENZENE/CN
L2             1 SEA SPE=ON  ABB=ON  PLU=ON  TERT-PENTYLBENZENE/CN
               E ISOPROPYLBENZENE/CN
L3             1 SEA SPE=ON  ABB=ON  PLU=ON  ISOPROPYLBENZENE/CN
               E 1,2-DIMETHYLPROPYLBENZENE/CN
               E (1,2-DIMETHYLPROPYL)BENZENE/CN
L4             1 SEA SPE=ON  ABB=ON  PLU=ON  "(1,2-DIMETHYLPROPYL)BENZENE"
               /CN
               E 1,2-DIMETHYLINDAN/CN
L5             1 SEA SPE=ON  ABB=ON  PLU=ON  "1,2-DIMETHYLINDAN"/CN
               E 1,3-DIMETHYLINDAN/CN
L6             1 SEA SPE=ON  ABB=ON  PLU=ON  "1,3-DIMETHYLINDAN"/CN
               E 1-METHYLTETRAHYDRONAPHTHALENE/CN

     FILE 'HCAPLUS' ENTERED AT 14:24:30 ON 10 DEC 2009
L7           408 SEA SPE=ON  ABB=ON  PLU=ON  L2
L8         12833 SEA SPE=ON  ABB=ON  PLU=ON  (L3 OR L4 OR L5 OR L6)
L9           173 SEA SPE=ON  ABB=ON  PLU=ON  L7 AND L8

     FILE 'ZCAPLUS' ENTERED AT 14:25:11 ON 10 DEC 2009
L10            QUE SPE=ON  ABB=ON  PLU=ON  ?ELECTROLYT?
L11            QUE SPE=ON  ABB=ON  PLU=ON  SOL# OR SOLN# OR SOLUTION#
L12            QUE SPE=ON  ABB=ON  PLU=ON  L10 (3A) L11

     FILE 'HCAPLUS' ENTERED AT 14:26:04 ON 10 DEC 2009
L13            1 SEA SPE=ON  ABB=ON  PLU=ON  L9 (L) L12

     FILE 'ZCAPLUS' ENTERED AT 14:27:25 ON 10 DEC 2009
L14            QUE SPE=ON  ABB=ON  PLU=ON  LI# OR LITHIUM#
L15            QUE SPE=ON  ABB=ON  PLU=ON  BATTERY# OR BATTERIES# OR
               ELECTROCHEM? (2A) CELL#
L16            QUE SPE=ON  ABB=ON  PLU=ON  L14 (3A) L15

     FILE 'HCAPLUS' ENTERED AT 14:28:07 ON 10 DEC 2009
L17            1 SEA SPE=ON  ABB=ON  PLU=ON  L9 (L) L16
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L18           1 SEA SPE=ON  ABB=ON  PLU=ON  L9 AND L16
L19           1 SEA SPE=ON  ABB=ON  PLU=ON  L9 AND L12
L20           1 SEA SPE=ON  ABB=ON  PLU=ON  L13 OR L17 OR L18 OR L19
                D L20 TI AU

     FILE 'REGISTRY' ENTERED AT 14:36:57 ON 10 DEC 2009
                E  1,3-DI-TERT-BUTYLBENZENE/CN
L21           1 SEA SPE=ON  ABB=ON  PLU=ON  "1,3-DI-TERT-BUTYLBENZENE"/CN

                E 1-TERT-BUTYL-3-ISOPROPYLBENZENE/CN
                E (1-TERT-BUTYL-3-ISOPROPYL)BENZENE/CN
                E (1-TERTBUTYL-3-ISOPROPYL)BENZENE/CN
                E 1-TERT-BUTYL/CN
                E 1-TERT-BUTYL 3/CN
                E 1-TERT-BUTYL 3-ISOPROPYL/CN
                E  1,4-DI-TERT-BUTYLBENZENE/CN
L22           1 SEA SPE=ON  ABB=ON  PLU=ON  "1,4-DI-TERT-BUTYLBENZENE"/CN

                E  1-TERT-BUTYL-4-ISOPROPYLBENZENE/CN
L23           1 SEA SPE=ON  ABB=ON  PLU=ON  1-TERT-BUTYL-4-ISOPROPYLBENZE
                NE/CN
                E 4-FLUORO-TERT-BUTYLBENZENE/CN
                E 4-FLUORO-ISOPROPYLBENZENE/CN
                E 4-FLUORO-ISOPROPYL-BENZENE/CN
                E 4-TERT-BUTYLBIPHENYL/CN
L24           1 SEA SPE=ON  ABB=ON  PLU=ON  4-TERT-BUTYLBIPHENYL/CN
                E 4-SEC-BUTYLBIPHENYL/CN
L25           1 SEA SPE=ON  ABB=ON  PLU=ON  4-SEC-BUTYLBIPHENYL/CN
                E 1,3-DI-TERT-PENTYLBENZENE/CN
                E 1-TERT-PENTYL-3-ISOPROPYLBENZENE/CN
                E 1-TERT-PENTYL-3-ISOPROPYL-BENZENE/CN
                E 1,4-DI-TERT-PENTYLBENZENE/CN
L26           1 SEA SPE=ON  ABB=ON  PLU=ON  "1,4-DI-TERT-PENTYLBENZENE"/C
                N
                E 1-TERT-PENTYL-4-ISOPROPYLBENZENE/CN
                E 1-TERT-BUTYL-4-TERT-PENTYLBENZENE/CN
                E 1-TERT-BUTYL-4-ISOPROPYLBENZENE/CN
L27           1 SEA SPE=ON  ABB=ON  PLU=ON  1-TERT-BUTYL-4-ISOPROPYLBENZE
                NE/CN

     FILE 'HCAPLUS' ENTERED AT 14:58:32 ON 10 DEC 2009
L28         168 SEA SPE=ON  ABB=ON  PLU=ON  L21
L29         355 SEA SPE=ON  ABB=ON  PLU=ON  L22
L30         113 SEA SPE=ON  ABB=ON  PLU=ON  L24
L31          12 SEA SPE=ON  ABB=ON  PLU=ON  L26
L32         955 SEA SPE=ON  ABB=ON  PLU=ON  L31 OR L30 OR L29 OR L28 OR
                L7
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L33           64 SEA SPE=ON  ABB=ON  PLU=ON  L23
L34           12 SEA SPE=ON  ABB=ON  PLU=ON  L25
L35           64 SEA SPE=ON  ABB=ON  PLU=ON  L27
L36        12866 SEA SPE=ON  ABB=ON  PLU=ON  L35 OR L34 OR L33 OR L8
L37          254 SEA SPE=ON  ABB=ON  PLU=ON  L32 AND L36
L38            5 SEA SPE=ON  ABB=ON  PLU=ON  L37 AND L15
L39            5 SEA SPE=ON  ABB=ON  PLU=ON  L37 (L) L10
L40            6 SEA SPE=ON  ABB=ON  PLU=ON  L38 OR L39
                 D SCA

=> d que l40
L2             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  TERT-PENTYLBENZ
                 ENE/CN
L3             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  ISOPROPYLBENZEN
                 E/CN
L4             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "(1,2-DIMETHYLP
                 ROPYL)BENZENE"/CN
L5             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "1,2-DIMETHYLIN
                 DAN"/CN
L6             1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "1,3-DIMETHYLIN
                 DAN"/CN
L7           408 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L2
L8         12833 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (L3 OR L4 OR L5
                 OR L6)
L10              QUE  SPE=ON  ABB=ON  PLU=ON  ?ELECTROLYT?
L15              QUE  SPE=ON  ABB=ON  PLU=ON  BATTERY# OR BATTERIES# OR EL
                 ECTROCHEM? (2A) CELL#
L21            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "1,3-DI-TERT-BU
                 TYLBENZENE"/CN
L22            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "1,4-DI-TERT-BU
                 TYLBENZENE"/CN
L23            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  1-TERT-BUTYL-4-
                 ISOPROPYLBENZENE/CN
L24            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  4-TERT-BUTYLBIP
                 HENYL/CN
L25            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  4-SEC-BUTYLBIPH
                 ENYL/CN
L26            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  "1,4-DI-TERT-PE
                 NTYLBENZENE"/CN
L27            1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  1-TERT-BUTYL-4-
                 ISOPROPYLBENZENE/CN
L28          168 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L21
L29          355 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L22
L30          113 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L24
L31           12 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L26
L32          955 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L31 OR L30 OR
                 L29 OR L28 OR L7
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L33          64 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L23
L34          12 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L25
L35          64 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L27
L36       12866 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L35 OR L34 OR
                L33 OR L8
L37         254 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L32 AND L36
L38           5 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L37 AND L15
L39           5 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L37 (L) L10
L40           6 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L38 OR L39


=> d l40 1-6 bib abs hitstr hitind

L40  ANSWER 1 OF 6  HCAPLUS  COPYRIGHT 2009 ACS on STN
AN   2005:1049966  HCAPLUS  Full-text
DN   143:349948
TI   Nonaqueous electrolyte solution for secondary lithium
     secondary battery
IN   Abe, Koji; Ushigoe, Yoshihiro; Ito, Akikazu
PA   Ube Industries, Ltd., Japan
SO   PCT Int. Appl., 27 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     ---------------     ----   --------    --------------------
     --------
PI   WO 2005091423        A1    20050929    WO 2005-JP5022
                                                                   200503
                                                                   18
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,
             CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
             GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,
             KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
             MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,
             SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
             UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,
             DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC,
             NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA,
             GN, GQ, GW, ML, MR, NE, SN, TD, TG
     CA 2560380           A1    20050929    CA 2005-2560380
                                                                   200503
                                                                   18
     CN 1954456           A     20070425    CN 2005-80015478
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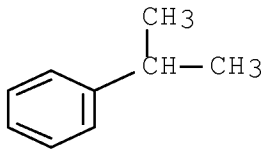
					20050318
US	20080248399	A1	20081009	US 2006-593231	20060918
KR	2006130258	A	20061218	KR 2006-721619	20061018
IN	2006CN03858	A	20070615	IN 2006-CN3858	20061018
PRAI	JP 2004-79693	A	20040319		
	WO 2005-JP5022	W	20050318		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

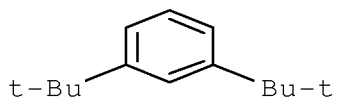
AB The **electrolyte** solution has an **electrolyte** dissolved in a nonaq. solvent and contains 0.1-10 % tert-alkyl benzene compound and 0.001-0.5% benzene compound, having C1-4 hydrocarbon group bonded to a benzene ring via the tertiary C atom, relative to the tert-alkyl benzene compound

IT **98-82-8**, Isopropylbenzene **1014-60-4**, 1,3-Di-tert-butylbenzene **2049-95-8**, tert-Pentylbenzene **4481-30-5**, (1,2-Dimethylpropyl)benzene
RL: MOA (Modifier or additive use); USES (Uses)
(**electrolyte** solns. containing tert-alkyl benzene compds. and benzene compds. for secondary lithium secondary **batteries**)

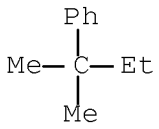
RN 98-82-8 HCAPLUS
CN Benzene, (1-methylethyl)- (CA INDEX NAME)



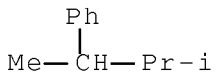
RN 1014-60-4 HCAPLUS
CN Benzene, 1,3-bis(1,1-dimethylethyl)- (CA INDEX NAME)



RN 2049-95-8 HCAPLUS
CN Benzene, (1,1-dimethylpropyl)- (CA INDEX NAME)



RN 4481-30-5 HCAPLUS
CN Benzene, (1,2-dimethylpropyl)- (CA INDEX NAME)



IC ICM H01M010-40
ICS C07C007-148; C07C015-02
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST lithium secondary **battery electrolyte** alkyl benzene compd
IT **Battery electrolytes**
(**electrolyte** solns. containing tert-alkyl benzene compds. and benzene compds. for secondary lithium secondary **batteries**)
IT 96-49-1, Ethylene carbonate 623-53-0, Methyl ethyl carbonate 12190-79-3, Cobalt lithium oxide (CoLiO2) 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 346417-97-8, Cobalt lithium manganese nickel oxide (Co0.33LiMn0.33Ni0.33O2)
RL: DEV (Device component use); USES (Uses)
(**electrolyte** solns. containing tert-alkyl benzene compds. and benzene compds. for secondary lithium secondary **batteries**)
IT 98-06-6, tert-Butylbenzene 98-82-8, Isopropylbenzene 135-98-8, sec-Butylbenzene 872-36-6, Vinylene carbonate 1014-60-4, 1,3-Di-tert-butylbenzene 1559-81-5 2049-95-8, tert-Pentylbenzene 4481-30-5,

(1,2-Dimethylpropyl)benzene 53563-67-0, Dimethylindan
RL: MOA (Modifier or additive use); USES (Uses)
(electrolyte solns. containing tert-alkyl benzene compds. and benzene compds. for secondary lithium secondary batteries)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:823988 HCAPLUS Full-text
DN 143:232676
TI Nonaqueous electrolyte for lithium secondary battery
IN Ahn, Soon-Ho; Lee, Jae-Hyun; Cho, Jeong-Ju; Lee, Ho-Chun; Son, Mi-Young; Kim, Hyeong-Jin; Lee, Han-Ho
PA LG Chem, Ltd., S. Korea
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005076403	A1	20050818	WO 2004-KR257	20040210
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1728291	A1	20061206	EP 2004-709768	20040210
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PT, RO, SE, SI, SK, TR				
	CN 1914761	A	20070214	CN 2004-80041548	20040210

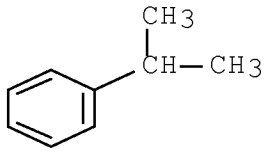
CN 100502132	C	20090617		
JP 2007522632	T	20070809	JP 2006-553038	200402 10
TW 250678	B	20060301	TW 2004-93106934	200403 16
US 20070141475	A1	20070621	US 2006-588481	200608 01
PRAI WO 2004-KR257	W	20040210		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

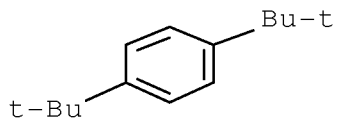
AB The invention relates to a nonaq. **electrolyte** solution containing new additives and a lithium secondary **battery** including the same. More particularly, the invention relates to a nonaq. **electrolyte** solution containing a lithium salt, an **electrolyte** compound, a first additive compound with an oxidation initiation potential of more than 4.2 V, and a second additive compound with an oxidation initiation potential of more than 4.2 V, which is higher in oxidation initiation potential than the first additive, and deposits oxidative products or form a polymer film, in oxidation, as well as a lithium secondary **battery** including the same. The present invention can provide a lithium secondary **battery** excellent in both the **battery** performance and the **battery** safety in overcharge by the combined use of the first additive and the second **battery** as additives to the nonaq. **electrolyte** solution

IT **98-82-8**, Isopropylbenzene **1012-72-2**, 1,4-Di-tert-butylbenzene
RL: MOA (Modifier or additive use); USES (Uses)
(nonaq. **electrolyte** for lithium secondary **battery**)

RN 98-82-8 HCAPLUS
CN Benzene, (1-methylethyl)- (CA INDEX NAME)



RN 1012-72-2 HCAPLUS
CN Benzene, 1,4-bis(1,1-dimethylethyl)- (CA INDEX NAME)



IC ICM H01M010-40
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST lithium secondary **battery** nonaq **electrolyte**;
safety lithium secondary **battery** nonaq **electrolyte**
IT Secondary **batteries**
(lithium; nonaq. **electrolyte** for lithium secondary **battery**)
IT **Battery electrolytes**
(nonaq. **electrolyte** for lithium secondary **battery**)
IT Aromatic compounds
RL: MOA (Modifier or additive use); USES (Uses)
(nonaq. **electrolyte** for lithium secondary **battery**)
IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 21324-40-3, Lithium hexafluorophosphate
RL: DEV (Device component use); USES (Uses)
(nonaq. **electrolyte** for lithium secondary **battery**)
IT 71-43-2, Benzene, uses 92-52-4, Biphenyl, uses 96-09-3, Phenyloxirane 96-43-5, 2-Chlorothiophene 98-06-6, tert-Butylbenzene **98-82-8**, Isopropylbenzene 99-62-7, 1,3-Diisopropylbenzene 100-18-5, 1,4-Diisopropylbenzene 100-41-4, Ethylbenzene, uses 100-42-5, Vinylbenzene, uses 100-47-0, Benzonitrile, uses 100-84-5, 3-Methylanisole 101-84-8, Diphenyl ether 103-63-9 104-85-8, 4-Methylbenzonitrile 104-93-8, 4-Methylanisole 106-42-3, 1,4-Dimethylbenzene, uses 108-48-5, 2,6-Dimethylpyridine 108-67-8, Mesitylene, uses 108-88-3, Toluene, uses 110-00-9, Furan 110-02-1, Thiophene 132-64-9, Dibenzofuran 139-66-2, Phenyl sulfide 140-39-6, p-Methylphenyl acetate 321-60-8, 2-Fluoro-1,1'-biphenyl 352-32-9, p-Fluorotoluene 352-70-5, m-Fluorotoluene 452-10-8, 2,4-Difluoroanisole 462-06-6, Fluorobenzene 609-40-5, 2-Nitrothiophene 616-44-4, 3-Methylthiophene 617-90-3, 2-Cyanofuran 827-52-1, Cyclohexylbenzene 873-49-4, Cyclopropylbenzene **1012-72-2**, 1,4-Di-tert-butylbenzene 1016-09-7, Diphenylmethyl methyl ether 1585-07-5,

1-Bromo-4-ethylbenzene 2745-25-7, 2-Furanacetonitrile 20282-30-8
30078-65-0, 3-Cyanofuran
RL: MOA (Modifier or additive use); USES (Uses)
(nonaq. electrolyte for lithium secondary battery)
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:219962 HCAPLUS Full-text
DN 142:282886
TI Nonaqueous solvent secondary battery
IN Takahashi, Kentaro
PA Sanyo Electric Co., Ltd., Japan
SO U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

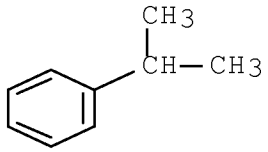
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20050053843	A1	20050310	US 2004-936658	20040909
	US 7582388	B2	20090901		
	JP 2005085608	A	20050331	JP 2003-316641	20030909
	TW 238554	B	20050821	TW 2004-93110633	20040416
	CN 1595711	A	20050316	CN 2004-10048573	20040608
	CN 100466362	C	20090304		
PRAI	JP 2003-316641	A	20030909		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB The invention concerns a nonaq. solvent secondary battery with a high initial charge/discharge capacity and excellent charge/discharge characteristics at high temperature, having a pos. electrode containing a pos. electrode active material capable of reversibly occluding and releasing lithium, a neg. electrode containing a neg. electrode active material capable of reversibly occluding and releasing lithium and a non-aqueous solvent electrolyte containing (1) acrylic acid anhydride, and (2) an aromatic compound having at least one electron donating group, wherein the electron donating

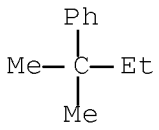
group comprises at least one member selected from any of the alkyl group, alkoxy group, alkylamino group and amine, provided that each of the alkyl group, alkoxy group and alkylamino group includes a halogen substituted group and a cycloaliph. group.

IT 98-82-8, Cumene 2049-95-8, tert-Amylbenzene
RL: DEV (Device component use); USES (Uses)
(nonaq. solvent secondary battery)

RN 98-82-8 HCAPLUS
CN Benzene, (1-methylethyl)- (CA INDEX NAME)



RN 2049-95-8 HCAPLUS
CN Benzene, (1,1-dimethylpropyl)- (CA INDEX NAME)



IC ICM H01M010-40
INCL 429329000; 429303000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST nonaq solvent secondary battery
IT Anhydrides
RL: DEV (Device component use); USES (Uses)
(cyclic; nonaq. solvent secondary battery)
IT Battery electrolytes
Secondary batteries
(nonaq. solvent secondary battery)
IT Aromatic compounds
Carbonaceous materials (technological products)
RL: DEV (Device component use); USES (Uses)
(nonaq. solvent secondary battery)
IT 62-53-3, Aniline, uses 85-42-7, 1,2-Cyclohexane dicarboxylic acid

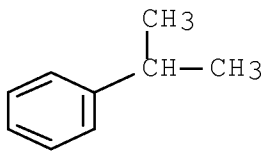
anhydride 85-44-9, Phthalic acid anhydride 98-06-6, tert-Butylbenzene 98-51-1, 4-tert-Butyltoluene 98-82-8, Cumene 100-41-4, Ethylbenzene, uses 100-61-8, n-Methylaniline, uses 100-66-3, Anisole, uses 103-65-1, Propylbenzene 103-69-5, n-Ethylaniline 103-73-1, Ethoxybenzene 104-51-8, Butylbenzene 104-93-8, 4-Methylanisole 108-30-5, Succinic acid anhydride, uses 108-31-6, Maleic acid anhydride, uses 108-32-7, Propylene carbonate 108-55-4, Glutaric acid anhydride 108-67-8, 1,3,5-Trimethylbenzene, uses 108-88-3, Toluene, uses 109-17-1, Tetraethylene glycol dimethacrylate 119-64-2, 1,2,3,4-Tetrahydronaphthalene 121-69-7, n,n-DiMethylaniline, uses 129-64-6, Norbornene-endo-2,3-dicarboxylic acid anhydride 135-98-8, sec-Butylbenzene 452-10-8, 2,4-DiFluoroanisole 456-49-5, 3-Fluoroanisole 459-60-9, 4-Fluoroanisole 496-11-7, Indane 535-77-3, 3-Isopropyltoluene 538-68-1, Amylbenzene 538-93-2, Isobutylbenzene 622-85-5, Propoxybenzene 626-25-5, Glycolic acid anhydride 701-30-4 827-52-1, Cyclohexylbenzene 873-49-4, Cyclopropylbenzene 935-79-5, cis-1,2,3,6-Tetrahydrophthalic acid anhydride 1007-26-7, (2,2-Dimethylpropyl)benzene 1131-15-3 2049-95-8, tert-Amylbenzene 2959-96-8 4100-80-5 4437-85-8, Butylene carbonate 17347-61-4 28928-97-4 29316-05-0, sec-Amylbenzene 93343-10-3, 3,5-DiFluoroanisole 124221-30-3 847484-87-1
RL: DEV (Device component use); USES (Uses)
(nonaq. solvent secondary battery)
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2003:982461 HCAPLUS Full-text
DN 140:44701
TI Redox mediator as an overcharge protection agent for 4 V class lithium-ion rechargeable cells
AU Shima, Kunihisa; Ue, Makoto; Yamaki, Jun-ichi
CS Mitsubishi Chemical Group Science and Technology Research Center, Inc., Ami, Inashiki, Ibaraki, 300-0332, Japan
SO Electrochemistry (Tokyo, Japan) (2003), 71(12), 1231-1235
CODEN: EECTFA; ISSN: 1344-3542
PB Electrochemical Society of Japan
DT Journal
LA English
AB It it well-known that an aromatic compound such as biphenyl is added into electrolyte solns. to prevent lithium-ion batteries from overcharging, generating hydrogen gas under overcharging conditions. We have examined the oxidative behaviors of one-benzene-ring aromatic compds. including benzene, toluene, ethylbenzene, cumene, tert-butylbenzene, and cyclohexylbenzene under the overcharging

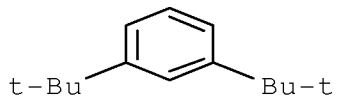
conditions. We have found that aromatic compds. without hydrogen atom at the benzylic position such as tert-butylbenzene generated mainly carbon dioxide, whereas those with hydrogen atom at the benzylic position showed polymerization accompanied by hydrogen evolution. It was considered that tert-butylbenzene works as a redox mediator, which mediates the oxidative decomposition of carbonate solvents evolving the carbon dioxide.

IT 98-82-8, Cumene 1014-60-4,
1,3-Di-tert-butylbenzene
RL: MOA (Modifier or additive use); USES (Uses)
(aromatic compound redox mediators as overcharge protection agent for
4 V class lithium-ion batteries)

RN 98-82-8 HCAPLUS
CN Benzene, (1-methylethyl)- (CA INDEX NAME)



RN 1014-60-4 HCAPLUS
CN Benzene, 1,3-bis(1,1-dimethylethyl)- (CA INDEX NAME)



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST lithium ion battery arom compd redox mediator overcharge protection
IT Secondary batteries
(aromatic compound redox mediators as overcharge protection agent for
4 V class lithium-ion batteries)
IT 71-43-2, Benzene, uses 98-06-6, tert-Butylbenzene
98-82-8, Cumene 100-41-4, Ethylbenzene, uses 108-88-3,
Toluene, uses 827-52-1, Cyclohexylbenzene 1014-60-4,

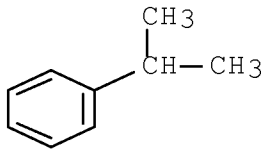
1,3-Di-tert-butylbenzene
RL: MOA (Modifier or additive use); USES (Uses)
(aromatic compound redox mediators as overcharge protection agent for
4 V class lithium-ion batteries)
OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 2000:809760 HCAPLUS Full-text
DN 134:46039
TI Characterization of emissions from diffusion flare systems
AU Strosher, Mel T.
CS Alberta Research Council, Calgary, AB, Can.
SO Journal of the Air & Waste Management Association (2000), 50(10), 1723-1733
CODEN: JAWAFC; ISSN: 1096-2247
PB Air & Waste Management Association
DT Journal
LA English
AB Emissions from flares typical like at oil-field battery sites in Alberta, Canada, were examined to determine the degree to which the flared gases were burned and to characterize the combustion products in the emissions. The study consisted of laboratory-, pilot-scale, and field-scale investigations. Combustion of all hydrocarbon fuels in laboratory- and pilot-scale tests produced a complex variety of hydrocarbon products within the flame, primarily by pyrolytic reactions. Acetylene, ethylene, benzene, styrene, ethynyl benzene, and naphthalene were the major constituents produced by conversion of >10% of the CH4 within the flames. A majority of hydrocarbons produced within pure gas fuel flames were effectively destroyed in the outer combustion zone, resulting in combustion efficiencies >98% as measured in the emissions. Adding liquid hydrocarbon fuels or condensates to pure gas streams had the largest effect on impairing the ability of the resulting flame to destroy pyrolytically-produced hydrocarbons as well as original hydrocarbon fuels directed to the flare. Cross-winds also reduced combustion efficiency (CE) of co-flowing gas/condensate flames by causing more unburned fuel and pyrolytically-produced hydrocarbons to escape into the emissions. Flaring solution gas at oil-field battery sites burned with an efficiency of 62-82%, depending on how much fuel was directed to flare or how much liquid hydrocarbon was in the knockout drum. In most cases, benzene, styrene, ethynyl benzene, ethynyl-Me benzenes, toluene, xylenes, acenaphthylene, biphenyl, and fluorene were the most abundant compds. in any emissions examined in field flare

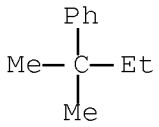
testing. Emissions from sour solution gas flaring also contained reduced S compds. and thiophenes.

IT 98-82-8, (1-Methylethyl)-benzene 2049-95-8, (1,1-Dimethylpropyl)benzene 17057-82-8
RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
(flame type, condensates and other liquid droplets during gaseous fuel flaring, and cross-winds effect on chemical composition of oil and
gas industry diffusion flare system emissions, Canada)

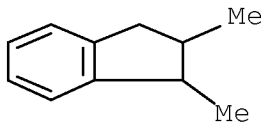
RN 98-82-8 HCAPLUS
CN Benzene, (1-methylethyl)- (CA INDEX NAME)



RN 2049-95-8 HCAPLUS
CN Benzene, (1,1-dimethylpropyl)- (CA INDEX NAME)



RN 17057-82-8 HCAPLUS
CN 1H-Indene, 2,3-dihydro-1,2-dimethyl- (CA INDEX NAME)



CC 59-4 (Air Pollution and Industrial Hygiene)

Section cross-reference(s): 51

IT 50-32-8, Benzo(a)pyrene, occurrence 65-85-0, Benzoic acid, occurrence 71-43-2, Benzene, occurrence 86-73-7, 9H-Fluorene 90-00-6, 2-Ethylphenol 90-12-0, 1-Methylnaphthalene 91-20-3, Naphthalene, occurrence 91-57-6, 2-Methylnaphthalene 92-52-4, 1,1'-Biphenyl, occurrence 95-48-7, 2-Methylphenol, occurrence 95-63-6, 1,2,4-Trimethylbenzene 95-87-4, 2,5-Dimethylphenol 95-93-2, 1,2,4,5-Tetramethylbenzene 98-82-8, (1-Methylethyl)-benzene 99-87-6, 1-Methyl-4-(1-methylethyl)benzene 100-41-4, Ethylbenzene, occurrence 100-42-5, Ethenylbenzene, occurrence 103-65-1, Propylbenzene 104-87-0, 4-Methylbenzaldehyde 106-42-3, 1,4-Dimethylbenzene, occurrence 106-44-5, 4-Methylphenol, occurrence 108-67-8, 1,3,5-Trimethylbenzene, occurrence 108-68-9, 3,5-Dimethylphenol 108-87-2, Methylcyclohexane 108-88-3, Methylbenzene, occurrence 109-66-0, Pentane, occurrence 110-54-3, Hexane, occurrence 110-82-7, Cyclohexane, occurrence 111-65-9, Octane, occurrence 111-84-2, Nonane 112-40-3, Dodecane 120-12-7, Anthracene, occurrence 124-18-5, Decane 129-00-0, Pyrene, occurrence 142-82-5, Heptane, occurrence 192-97-2, Benzo(e)pyrene 203-64-5, 4H-Cyclopenta(def)phenanthrene 206-44-0, Fluoranthene 208-96-8, Acenaphthylene 217-59-4, Triphenylene 218-01-9, Chrysene 232-95-1, Naphtho[2,1-B]furan 238-84-6, 11H-Benzo(a)fluorene 243-17-4, 11H-Benzo(b)fluorene 259-79-0, Biphenylene 488-23-3, 1,2,3,4-Tetramethylbenzene 527-53-7, 1,2,3,5-Tetramethylbenzene 536-74-3, Ethynylbenzene 562-49-2, 3,3-Dimethylpentane 571-58-4, 1,4-Dimethylnaphthalene 571-61-9, 1,5-Dimethylnaphthalene 575-37-1, 1,7-Dimethylnaphthalene 581-40-8, 2,3-Dimethylnaphthalene 589-34-4, 3-Methylhexane 611-14-3, 1-Ethyl-2-methylbenzene 611-15-4, 1-Ethenyl-2-methyl-benzene 613-12-7, 2-Methylanthracene 613-59-2, 2-(Phenylmethyl)naphthalene 619-99-8, 3-Ethylhexane 620-83-7, 1-Methyl-4-(phenylmethyl)benzene 638-04-0, cis-1,3-Dimethylcyclohexane 643-93-6, 3-Methyl-1,1'-biphenyl 700-12-9, Pentamethylbenzene 713-36-0, 1-Methyl-2-(phenylmethyl)benzene 832-71-3, 3-Methylphenanthrene 844-51-9, 2,5-Cyclohexadiene-1,4-dione, 2,5-Diphenyl- 886-66-8, Benzene, 1,1'-(1,3-Butadiyne-1,4-diyl)bis- 922-28-1, 3,4-Dimethylheptane 933-98-2, 1-Ethyl-2,3-dimethylbenzene 934-80-5, 4-Ethyl-1,2-dimethylbenzene 939-27-5, 2-Ethylnaphthalene 1074-17-5, 1-Methyl-2-propylbenzene 1120-21-4, Undecane 1196-58-3, (1-Ethylpropyl)benzene 1430-97-3, 2-Methyl-9H-fluorene 1576-67-6, 3,6-Dimethylphenanthrene 1678-91-7, Ethylcyclohexane 1678-98-4, (2-Methylpropyl)-cyclohexane 1730-37-6, 1-Methyl-9H-fluorene 1812-51-7, 1,1'-Biphenyl, 2-Ethyl- 1839-63-0, 1,3,5-Trimethylcyclohexane 2049-95-8, (1,1-Dimethylpropyl)benzene 2050-24-0, 1,3-Diethyl-5-methylbenzene 2051-30-1, 2,6-Dimethyloctane 2131-41-1,

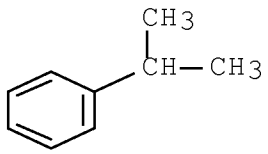
1,4,5-Trimethylnaphthalene 2131-42-2, 1,4,6-Trimethylnaphthalene 2206-23-7, 3-Penten-1-yne 2234-75-5, 1,2,4-Trimethylcyclohexane 2452-99-5, 1,2-Dimethylcyclopentane 2531-84-2, 2-Methylphenanthrene 2610-95-9 3061-36-7, 1,4-Diphenoxybenzene 3379-37-1, Benzene, 1,2-Diphenoxy- 3442-78-2, 2-Methylpyrene 3674-65-5, 2,3-Dimethylphenanthrene 3674-66-6, 2,5-Dimethylphenanthrene 3674-73-5, 2,3,5-Trimethylphenanthrene 3855-26-3, 2-Ethyl-4-methylphenol 4425-82-5, 9-Methylene-9H-fluorene 4489-84-3, (3-Methyl-2-butenyl)benzene 4612-63-9, 2,3-Dimethyl-9H-fluorene 4957-14-6 5911-04-6, 3-Methylnonane 6975-92-4, 2,5-Dimethyl-1-hexene 13151-34-3, 3-Methyldecane 14064-48-3 17057-82-8 17302-23-7, 4,5-Dimethylnonane 21895-13-6 21895-16-9 22364-43-8 25155-15-1, Methyl(1-methylethyl)benzene 25340-17-4, Diethylbenzene 29053-04-1, Cyclopentane, 1-Methyl-3-(2-methylpropyl)- 55712-60-2, Benzo(b)thiophene, 3-(2-Naphthalenyl)- 61142-07-2 74685-42-0, 1-Methyl-2-(2-phenylethenyl)benzene
RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
(flame type, condensates and other liquid droplets during gaseous fuel flaring, and cross-winds effect on chemical composition of oil and
gas industry diffusion flare system emissions, Canada)
OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2009 ACS on STN
AN 1956:54712 HCAPLUS Full-text
DN 50:54712
OREF 50:10440g-h
TI Ionic polymerization. VII. Relative reactivities of mono- and p-dialkylbenzenes as molecular terminating agents in the cationic polymerization of styrene
AU Overberger, C. G.; Endres, G. F.; Monaci, Avito
CS Polytech. Inst. of Brooklyn, Brooklyn, NY
SO Journal of the American Chemical Society (1956), 78, 1969-73
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA Unavailable
AB cf. C.A. 49, 15409a; 50, 2456e. The mol. termination consts. kr/kp of 8 mono- and p-dialkyl-benzenes were determined in the polymerization of styrene (I) by SnCl4. The activating effect of the alkyl substituents on the aromatic nucleus was in the order Me > Et > iso-Pr > Me3C, in agreement with their effect in other types of electrophilic aromatic substitution. This order of activation is

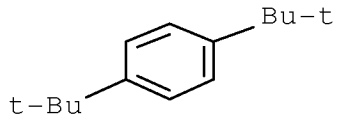
believed to be the result largely of steric effects. The results indicate that under these conditions hydride transfer from the side chains of these compds. does not take place to a significant extent.

IT 98-82-8, Cumene 1012-72-2, Benzene, p-di-tert-butyl-
(in styrene polymerization by SnCl4 as terminating agent)

RN 98-82-8 HCAPLUS
CN Benzene, (1-methylethyl)- (CA INDEX NAME)



RN 1012-72-2 HCAPLUS
CN Benzene, 1,4-bis(1,1-dimethylethyl)- (CA INDEX NAME)



CC 31 (Synthetic Resins and Plastics)

IT Ions
(electrolytic, polymerization by)

IT 98-51-1, Toluene, p-tert-butyl- 98-82-8, Cumene
99-87-6, p-Cymene 1012-72-2, Benzene, p-di-tert-butyl-
(in styrene polymerization by SnCl4 as terminating agent)

=>